Risk-Based Decision Making using the Defect Detection and Prevention (DDP) Approach

Dr. Martin S. Feather,
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12:00 - 1:00 PM
167 Conference Room

DDP (Defect Detection and Prevention) is a risk management framework and tool, developed and applied at JPL, to study and plan for infusion of advanced technologies, and to aid projects in risk assessment and risk mitigation. The framework has proven successful at identifying problematic requirements (those which will be the most difficult to attain), optimizing the allocation of resources so as to maximize requirements attainment, identifying areas where research investments should be made, and supporting tradeoff analyses among major alternatives.

This talk will describe how DDP supports defect detection and prevention, using its combination of experts' knowledge and insights, a structured process to direct them, and a custom support software tool to perform calculation, visualization and search. Learn how you could apply this tool to mitigate risk on your project!

Dr. Steven L. Cornford is a Senior Engineer in the Strategic Systems Technology Program Office (133) at JPL. He is currently involved with improving JPL's technology infusion processes, and serves as the Principal Investigator for the development and implementation of the DDP software tool. Also, he has been an instrument systems engineer, a Payload Reliability Assurance Program Element Manager, and a test-bed Cognizant Engineer. He received the NASA Exceptional Service Medal in 1997. Cornford received bachelors degrees in mathematics and physics from the University of California, Berkeley, and a doctorate in physics from Texas A&M University in 1992.

Dr. Martin S. Feather is a Principal in the Software Quality Assurance Group (512) at JPL. He works on developing research ideas and maturing them into practice, with particular interests in the areas of software validation (analysis, test automation, V&V techniques) and of early phase requirements engineering and risk management. He obtained bachelors and masters degrees in mathematics and computer science from Cambridge University, England, and a Ph.D. in artificial intelligence from the University of Edinburgh, Scotland.

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